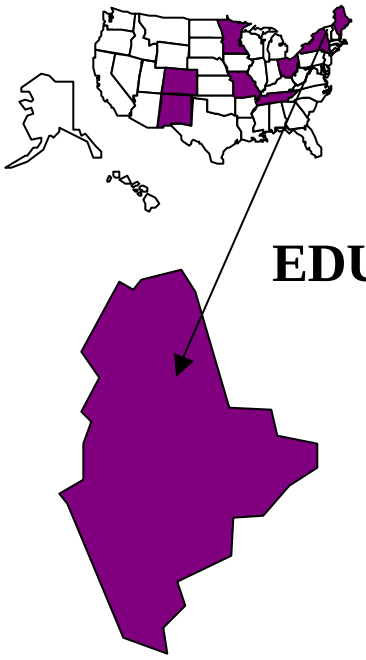

THE HEALTH CARE WORKFORCE IN EIGHT STATES: EDUCATION, PRACTICE AND POLICY

Spring 2002

MAINE

TABLE OF CONTENTS

The Health Care Workforce in Eight States: Education, Practice and Policy

PROJECT DESCRIPTION

Historically, both federal and state governments have had a role in developing policy to shape the health care workforce. The need for government involvement in this area persists as the private market typically fails to distribute the health workforce to medically underserved and uninsured areas, provide adequate information and analysis on the nature of the workforce, improve the racial and ethnic cultural diversity and cultural competence of the workforce, promote adequate dental health of children, and assess the quality of education and practice.

It is widely agreed that the greatest opportunities for influencing the various environments affecting the health workforce lie within state governments. States are the key actors in shaping these environments, as they are responsible for:

- financing and governing health professions education;
- licensing and regulating health professions practice and private health insurance;
- purchasing services and paying providers under the Medicaid program; and
- designing a variety of subsidy and regulatory programs providing incentives for health professionals to choose certain specialties and practice locations.

Key decision-makers in workforce policy within states and the federal government are eager to learn from each other. This initiative to compile in-depth assessments of the health workforce in 8 states is an important means of insuring that states and the federal government are able to effectively share information on various state workforce data, issues, influences and policies.

Products of this study include individual health workforce assessments for each of the eight states and a single assessment that compares various data and influences across the eight states. In general, each state assessment provides the following:

1) A summary of health workforce data, available resources and a description of the extent the state invests in collecting workforce data. [Part of this information has been provided by the Bureau of Health Professions];
2) A description of various issues and influences affecting the health workforce, including the state's legislative and regulatory history and its current programs, financing and policies affecting health professions education, service placement and reimbursement, planning and monitoring, and licensure/regulation;
3) An assessment of the state's internal capacity and existing strategies for addressing the above workforce issues and influences; and
4) An analysis of the policy implications of the state's current workforce data, issues, capacity and strategies.

The development of the project's data assimilation strategy, content and structure was guided by an expert advisory panel. Members of the advisory panel included both experts in state workforce policy (i.e., workforce planners, researchers and educators) and, more broadly, influential state health policymakers (i.e., state legislative staff, health department officials). The advisory panel has helped to ensure the workforce assessments have an appropriate content and effective format for dissemination and use by both state policymakers and workforce experts/officials.

STUDY METHODOLOGY

Study Purpose and Audience

Key decision-makers in workforce policy within states and the federal government are eager to learn from each other. Because states increasingly are being looked to by the federal government and others as proving grounds for successful health care reform initiatives, new and dynamic mechanisms for sharing innovative and effective state workforce strategies between states and with the federal government must be implemented in a more frequent and far reaching manner. This initiative to compile comprehensive capacity assessments of the health workforce in 8 states is an important means of insuring that states and the federal government are able to effectively share information on various state workforce data, issues and influences.

Each state workforce assessment report is not intended to be voluminous; rather, information is presented in a concise, easy-to-read format that is clearly applicable and easily digestible by busy state policymakers as well as by workforce planners, researchers, educators and regulators.

Selection of States

NCSL, with input from HRSA staff, developed a methodology for identifying and selecting 8 states to assess their health workforce capacity. The methodology included, but was not limited to, using the following criteria:

a. States with limited as well as substantial involvement in one or more of the following areas: statewide health workforce planning, monitoring, policymaking and research;
b. States with presence of unique or especially challenging health workforce concerns or issues requiring policy attention;
c. States with little involvement in assessing health workforce capacity despite the presence of unique or especially challenging health workforce concerns or issues requiring policy attention;
d. Distribution of states across Department of Health and Human Services regions;
e. States with Bureau of Health Professions (BHPr) - supported centers for health workforce research and distribution studies;
f. States with primarily urban and primarily rural health workforce requirements; and
g. States in attendance at BHPr workforce planning workshops or states that generally have interest in workforce modeling.

Collection of Data

NCSL used various means of collecting information for this study. Methods exercised included:

a. Phone and mail interviews with state higher education, professions regulation, and recruitment/retention program officials;
b. Custom data tabulations by national professional trade associations and others (i.e., Quality Resource Systems, Inc.; Johns Hopkins University School of Public Health) with access to national data bases;
c. Tabulations of data from the most recent edition of federal and state government databases (e.g., National Health Service Corps field strength);
d. Site visit interviews with various officials in the ten profile states;
e. Personal phone conversations with other various state and federal government officials;
f. Most recently available secondary data sources from printed and online reports, journal articles, etc.; and
g. Comments and guidance from members of the study's expert advisory panel.

STATE SUMMARY

Maine remains a predominantly rural, sparsely-populated state with a very small minority and ethnic population. Over a quarter of its population live in a primary care health professional shortage area (HPSA), and close to a fifth live in a dental HPSA. Concurrently, the number of National Health Service Corps professionals per 10.000 population in HPSAs is nearly four times the national average.

Despite the geographic disparities in access to health professionals, Maine's proportion of uninsured children and non-elderly is below average and is decline. Surprisingly, the state enjoys a significantly higher overall proportion of physicians, registered nurses, nurse practitioners, and physician assistants per 100,000 population than nationwide. However, it has fewer dentists and pharmacists than the U.S. average. The state has one private osteopathic medical school and no dental or pharmacy school.

Recently, the state has upped Medicaid payments for physicians, dentists and other health professionals. Despite a need to offset a $248 million 2002 budget shortfall in the state, Maine's governor reversed plans to cut Medicaid reimbursements. Medicaid now reimburses physicians and other health professionals for telemedicine services. Telehealth related services have received significant attention in Maine. A 2000 telehealth advisory group was formed by the governor to evaluate and develop telehealth applications and examine the cost effectiveness of existing and potential services in Maine.

Like many states, Maine has begun to realize it has a shortage of skilled health workers in several professions. Because Maine is small and one of the most rural states in the nation, the state's attention to health workforce issues historically has focused on recruiting workers from outside the state. The strategy is starting to lose favor with many policymakers who now realize that making available a quality workforce is about retention—both in terms of education and practice—as well as recruitment. Many recommendations from recent workforce task forces and groups in the state carry significant price tags that are not likely to gain serious attention for state lawmakers saddled with addressing major budget deficits. A somewhat less expensive idea involves efforts by the hospital association and other groups to seek legislative support for the creation of a statewide minimum health workforce data set and analysis center to address the serious lack of health workforce information.

In 2001, Maine became the first state in the nation to enact a law limiting mandatory overtime for nurses. Concurrently, there remains debate as to whether state policymakers concerned about the nursing shortage should focus their attention more on retaining existing nurses in the profession or looking to the future to train more nurses. Related recent or pending legislation, however, appears to have little chance of passage, due largely to the state's current fiscal crisis.

There is consensus that Maine is facing a shortage of dentists, particularly in rural areas of the state. Growing evidence of a maldistributed, overworked and aging dental workforce is documented in both a 1999 workforce report by state dental association and a 2001 report on oral health by the Department of Human Services. Maine has one of the lowest dentists per 100,000 population ratios nationwide. The state also has no dental school and has had difficulty establishing clinical training sites for graduate dentists. Despite a modest fee increase in 1998, the state's current dentists remain concerned about low Medicaid reimbursement rates. As in other states, Maine's dentists are reported to have turned away Medicaid recipients in large numbers due to low payment rates. In 1998, the Legislature expanded the scope of practice for dental hygienists by allowing them to apply to gain limited supervision by dentists in the provision of certain services in "public health" settings such as schools and nursing homes. Effective in 2001, it is not clear how the measure will benefit the practice of hygienists and access to oral health care in the state.

I. WORKFORCE SUPPLY AND DEMAND

Arguably, it is most important initially to understand the marketplace for a state's health care workforce. How many health professionals are in practice statewide and in medically underserved communities? What are the demographics of the population served? How is health care organized and paid for in the state? This section attempts to answer some of these questions by presenting state-level data collected from various sources.

Table I-a.

POPULATION		ME	U.S.
Total Population (2000)		**1,274,923**	281,421,906
Sex (2000)	% Female	**51.3**	50.9
	% Male	**48.7**	49.1
Age (2000)	% less than 18	**23.6**	25.7
	% 18-64	**62.0**	61.9
	% 65 or over	**14.4**	12.4
% Minority/Ethnic (1997-99)		**1.2**	29.1
% Metropolitan (2000)*		**40.3**	79.9

* As defined by the U.S. Office of Management and Budget

Sources: U.S. Census Bureau, AARP.

Less than 2% of Maine's population are minorities, and less than half its residents live in metropolitan areas.

Table I-b.

PROFESSION UTILIZATION	ME	U.S.
% Adults who Reported Having Routine Physical Exam Within Past Two Years (1997)	**85.0**	83.2 (Median)
Average # of Retail Prescription Drugs per Resident (1999)	**10.0**	9.8
% Adults who Made Dental Visit in Preceding Year by Annual Family Income (1999):		
Less than $15,000	**38**	
$15,000 - $34,999	**58**	
$ 35,000 or more	**77**	

Sources: CDC, AARP, GAO.

Only 38% of Maine adults with family incomes under $15,000 visited a dentist in 1999.

Table I-c.

ACCESS TO CARE		ME	U.S.
% Non-elderly (under age 65) Without Health Insurance	1999-2000	**13**	16.0
	1997-1999	**15**	18.0
% Children Without Health Insurance	1999-2000	**7**	12.0
	1997-1999	**11**	14.0
% Not Obtaining Health Care Due to Cost (2000)		**11.2**	9.9
% Living in Primary Care HPSA (2001)		**25.8**	19.9
# Practitioners Needed to Remove Primary Care HPSA Designation (2001)		**44**	--
% Living in Dental HPSA (2001)*		**17.1**	13.7
# Practitioners Needed to Remove Dental HPSA Designation (2001)		**28**	--

HPSA = Health Professional Shortage Area
* It is commonly believed that there are additional areas in the state that may be eligible to receive HPSA designation.

Sources: KFF, AARP, BPHC-DSD.

Maine's proportion of children and non-elderly without health insurance is less than the U.S. as a whole. On the other hand, the state has more residents living in primary care and dental HPSAs than the national average.

Table I-d.

PROFESSIONS SUPPLY				
Profession		**# Active Practitioners**	**# Active Practitioners per 100,000 Population**	
			ME	**U.S.**
Physicians (1998)		**2,613**	**209.4**	198
Physician Assistants (1999)		**323**	**25.8**	10.4
Nurses	RNs (2000)	**13,072**	**1,025**	782
	LPNs (1998)	**2,670**	**214.0**	249.3
	CNMs (2000)	**48**	**3.8**	2.1
	NPs (1998)	**530**	**42.5**	26.3
	CRNAs (1997)	**132**	**10.6**	8.6
Pharmacists (1998)		**780**	**62.5**	65.9
Dentists (1998)		**548**	**43.9**	48.4
Dental Hygienists (1998)		**700**	**56.1**	52.1
% Physicians Practicing Primary Care			**30.0** (30.0 U.S.)	
% Registered Nurses Employed in Nursing			**82.8** (81.7 U.S.)	
% of MDs Who Are International Medical Graduates (IMGs)			**12.0** (24.0 U.S.)	

RN= Registered Nurse, LPN= Licensed Practical Nurse, CNM= Certified Nurse Midwife, NP= Nurse Practitioner
CRNA= Certified Registered Nurse Anesthetist

Source: HRSA-BHPr.

Maine has more physicians, physician assistants, registered nurses, certified nurse midwives, nurse practitioners, certified registered nurse anesthetists, and dental hygienists per 100,000 population than the national average.

Table I-e.

NATIONAL HEALTH SERVICE CORPS (NHSC) FIELD STRENGTH			
Total Field Strength (FY 2001) * Includes mental/behavioral health officials	% in Urban Areas	% in Rural Areas	# Per 10,000 Population Living in HPSAs
33	**0**	**100**	**1.93** (0.49 U.S.)

Field Strength by Profession	
Physicians	**17**
Nurses	**6**
Physician Assistants	**4**
Dentists/Hygienists	**1**

HPSA= Health Professional Shortage Area

Source: BHPr-NHSC.

Maine has nearly four times as many NHSC professionals per 10,000 population living in HPSAs than the U.S. as a whole.

Table I-f.

MANAGED CARE				
Penetration Rate of Commercial and Medicaid HMOs (as % of total population), 2000			**ME**	**U.S.**
			27.0	28.1
Profession	MCOs required by state to include profession on their provider panel*	Profession allowed by state to serve as primary care provider in MCOs	Profession allowed by state to coordinate primary care as part of a standing referral	Profession allowed by state to engage in collective bargaining with MCOs
Physicians	**No**	**No**	**Yes**	**No**
Nurses	**No**	**No**	**No**	**No**
Pharmacies	**No**	**No**	**No**	**No**
Dentists	**No**	**No**	**No**	**No**
State requires certain individuals enrolled in MCOs to have direct access to certain specialty (OB/GYN, etc.) providers.				**Yes**
State requires certain individuals enrolled in MCOs to receive a standing referral to a specialist (OB/GYN, etc.).				**Yes**

MCOs = Managed Care Organizations HMOs = Health Maintenance Organizations OB/GYN = Obstetrician/Gynecologist

* This requirement does not preclude MCOs from including additional professions on their provider panels.

Sources: HPTS, AARP.

Twenty-seven percent of Maine residents receive their health care from an HMO.

Table I-g.

REIMBURSEMENT OF SERVICES					
Medicaid	Profession	% Active Practitioners Enrolled	% Enrolled Receiving Annual Payments Greater Than $10,000[1]	Increase of 10% or More in Overall Payment Rates 1995-2000	Bonus or Special Payment Rate for Practice in Rural or Medically Underserved Area
	Physicians	*	**N/A**	**N/A**	**N/A**
	NPs	*	**N/A**	**N/A**	**N/A**
	Dentists	**N/A**	**N/A**	**N/A**	**N/A**
	# of Enrolled Pharmacies				**N/A**
	% Change in Physician Fees (All Services), 1993-1998				**49.6**
	Recent State-Mandated Payment Increases				**Yes** (various professions)
Medicare	# Active Practitioners Enrolled (2000)				**3,627**
	% Practitioners who Accept Fee as Full Payment (2001)				**93.6**

[1] Generally seen as an indicator of significant participation in the Medicaid program.
* Numerator data for physicians and nurse practitioners from state Medicaid agencies were unusable: many professionals were apparently double-counted, perhaps due to varying participation in different health plans.
N/A – Data was not available

Sources: State Medicaid programs, Norton and Zuckerman "Trends", HPTS, AARP.

Medicaid fees for physicians increased by nearly 50% between 1993 and 1998.

II. HEALTH PROFESSIONS EDUCATION

State efforts to help ensure an adequate supply of health professionals can be understood in part by examining data on the state's health professions education programs–counts of recent students and graduates, amounts of state resources invested in education, and other factors. State officials can gauge how well these providers reflect the state's population by also examining how many students and graduates are state residents or minorities. Knowing to what extent states are also investing in primary care education and how many medical school graduates remain in-state to complete residencies in family medicine is also important.

Table II-a.

UNDERGRADUATE MEDICAL EDUCATION			
# of Medical Schools *(Allopathic and Osteopathic)*	**1**	Public Schools	**0**
		Private Schools	**1**
		Osteopathic Schools	**1**
# of Medical Students *(Allopathic and Osteopathic)*	1997-1998	**401**	
	1999-2000	**460**	
# Medical Students per 100,000 Population[1]	1999-2000	**36.1**	
% Newly Entering Students (*Allopathic)* who are State Residents, 1999-2000		**N/A***	
Requirement for Students in Some/All Medical Schools to Complete a *Primary Care Clerkship*	By the State	**Yes**	
	By Majority of Schools	**Yes**	
# of Medical School Graduates *(Allopathic and Osteopathic)*	1998	**74**	
	2000	**110**	
# Medical School Graduates per 100,000 Population[1]	2000	**8.6**	
% Graduates *(Allopathic)* who are Underrepresented Minorities, 1994-1998		**N/A*** (10.5 U.S.)	
% 1987-1993 Medical School Graduates *(Allopathic)* Entering Generalist Specialties		**N/A*** (26.7 U.S.)	
State Appropriations to Medical Schools *(Allopathic and Osteopathic)*, 1997-1998	Total	**$263,794**	
	Per Student	**$573**	

[1] Denominator number is state population from 2000 U.S. Census.
N/A = Data was not available
N/A* = Data was not applicable

Sources: AAMC, AAMC Institutional Goals Ranking Report, AACOM, Barzansky et al. "Educational Programs", State higher education coordinating boards.

Maine has one medical school which is osteopathic.

Table II-b.

GRADUATE MEDICAL EDUCATION (GME)		
# of Residency Programs *(Allopathic and Osteopathic)*, 1999-2000[1]		**24**
# of Physician Residents *(Allopathic and Osteopathic)*, 1999-2000[1]		**358**
# Residents Per 100,000 Population, 1999-2000		**28.1**
% Allopathic Residents from In-State Medical School, 1999-2000		**N/A***
% Residents who are International[2] Medical Graduates, 1999-2000		**11.0** (26.4 U.S.)
Requirement to Offer Some or All Residents a *Rural Rotation*	By the State	**No**
	By Most Primary Care Residencies	**No**
State Appropriations for Graduate Medical Education, 2000-2001[4,5]	Total	**0**
	Per Resident	**0**
Medicaid Payments for Graduate Medical Education, 1998[3]		**$2.4 million**
	Payments as % of Total Medicaid Hospital Expenditures	**1.2** (7.4 U.S.)
	Payments Made Directly to Teaching Programs Under Capitated Managed Care	No
	Payments Linked to State Workforce Goals/ Goals of Improved Accountability	**No**
Medicare Payments for Graduate Medical Education, 1998[3]		**$25.07 million**

[1] Includes estimated number of osteopathic residencies/residents not accredited by the Accreditation Council for Graduate Medical Education.
[2] Does not include residents from Canada.
[3] Explicit payments for both direct and indirect GME cost.
[4] Funds largely are for graduate education.
[5]Dollar amounts refer largely to funding for family medicine training programs. However, these funds that flow directly to teaching hospitals are not necessarily earmarked by the state for graduate medical education.
N/A* = Data was not applicable

Sources: AMA, AMA State-level Data, AACOM, State higher education coordinating boards, Henderson "Funding", Oliver et al. "State Variations."

The state appropriated no funds for graduate medical education in 2000-2001.

Table II-c.

FAMILY MEDICINE RESIDENCY TRAINING			
# of Residency Programs, 2001	**4**	# Residencies Located in Inner City	**0**
		# Residencies Offering Rural Fellowships or Training Tracks	**0**
# of Family Medicine Residents, 1999-2000			**N/A**
# Family Medicine Residents per 100,000 Population, 1999-2000[1]			**N/A**
% Graduates *(from state's Allopathic and Osteopathic medical schools)* who were First Year Residents in Family Medicine, 1995-2000			**N/A*** (14.8 U.S.)
% Graduates *(from state's Allopathic medical schools)* Choosing a Family Medicine Residency Program Who Entered an In-State Family Medicine Residency, 1995-2000			**N/A*** (48.1 U.S.)
State Appropriations for Family Medicine Training,[2] 2000-2001		Total	**0**
		Per Residency Slot	**0**

[1] Denominator number is state population from 2000 U.S. Census.
[2] Dollar amounts refer largely to funding family medicine training programs. However, these funds that flow directly to teaching hospitals are not necessarily earmarked by the state for graduate medical education.
N/A* = Data was not applicable
N/A = Data was not available

Sources: AAFP, AAFP State Legislation, Kahn et al., Pugno et al. and Schmittling et al. "Entry of U.S. Medical School Graduates".

Maine has four family medicine residency programs.

Table II-d.

NURSING EDUCATION				
# of Nursing Schools	**13**	Public Schools		**9**
		Private Schools		**4**
# of Nursing Students[1] 1998-2000	**2,680**	# Associate Degree, 1998-1999		**559**
		# Baccalaureate Degree	1998-1999	**1700**
			1999-2000	**1873**
		# Masters Degree	1998-1999	**421**
			1999-2000	**429**
		# Doctoral Degree	1998-1999	**0**
			1999-2000	**0**
	# Per 100,000 population[2]			**210.2**
# of Nursing School Graduates[1] 1999-2000	**599**	# Associate Degree, 1999		**272**
		# Baccalaureate Degree	1999	**270**
			2000	**247**
		# Masters Degree	1999	**57**
			2000	**47**
		# Doctoral Degree	1999	**0**
			2000	**0**
	# Per 100,000 population[2]			**47.0**
State Appropriations to Nursing Schools *(Baccalaureate, Masters and Doctoral)*	Per Student: **Data not available**			

[1] Annual figure for Associate, Baccalaureate, Masters and Doctoral students/graduates for most recent years available.
[2] Denominator number is the state population from the 2000 U.S. Census.

Sources: NLN, AACN, State higher education coordinating boards.

Enrollments in Maine's baccalaureate and masters degree programs rose slightly between 1999 and 2000.

Table II-e.

PHARMACY EDUCATION			
# of Pharmacy Schools	**0**	Public Schools	**0**
		Private Schools	**0**
# of Pharmacy Students, 2000-2001		# Baccalaureate Degree	**0**
		# Doctoral Degree *(PharmD)*	**0**
	# Per 100,000 population*		**0**
# of Pharmacy Graduates, 2000		# Baccalaureate Degree	**0**
		# Doctoral Degree *(PharmD)*	**0**
	# Per 100,000 population*		**0**

* Denominator number is state population from 2000 U.S. Census.

Source: AACP.

Table II-f.

PHYSICIAN ASSISTANT EDUCATION		
# of Physician Assistant Training Programs, 1999-2000		**1**
# of Physician Assistant Program Students, 2000-2001		**N/A**
# Physician Assistant Program Students per 100,000 Population[1]		**N/A**
# of Physician Assistant Program Graduates, 2001		**34**
# Physician Assistant Program Graduates per 100,000 Population[1]		**2.67**
State Appropriations for Physician Assistant Training Programs, 2000-2001[2]	Total	**0**
	Per Student	**0**
	As % of Total Program Revenue	**0**

[1] Denominator number is state population from 2000 U.S. Census.
[2] In general, state appropriations are not directly earmarked for these programs, but rather to their sponsoring institutions.
N/A = Data was not available

Sources: APAP, APAP Annual Report.

Table II-g.

DENTAL EDUCATION			
# of Dental Schools	**0**	Public Schools	**0**
		Private Schools	**0**
# of Dental Students, 2000-2001	**0**		
# Dental Students per 100,000 Population, 2000-2001*	**0**		
# of Dental Graduates, 2001	**0**		
# Dental Graduates per 100,000 Population, 2001*	**0**		
State Appropriations to Dental Schools	**0**		

* Denominator number is state population from 2000 U.S. Census.

Source: ADA.

Table II-h.

DENTAL HYGIENE EDUCATION			
# of Dental Hygiene Training Programs	**2**	Public Schools	**1**
		Private Schools	**1**
# of Dental Hygiene Program Students, 1997-1998	**163**		
# Dental Hygiene Program Students per 100,000 Population*	**12.8**		
# of Dental Hygiene Program Graduates, 1997-1998	**42**		
# Dental Hygiene Program Graduates per 100,000 Population*	**3.3**		

* Denominator number is state population from 2000 U.S. Census.

Sources: ADHA, AMA Health Professions.

III. PHYSICIAN PRACTICE LOCATION

The following tables examine in-state physician practice location from two different vantage points: (1) of all physicians who were trained (went to medical school or received their most recent GME training) in the state between 1975 and 1995, and (2) of all physicians who are now practicing in the state, regardless of where they were trained. Complied from the American Medical Association's 1999 Physician Masterfile by Quality Resource Systems, Inc., the data importantly illustrates to what extent physician graduates practice in many of the state's small towns, using the rural-urban continuum developed by the U.S. Department of Agriculture.

PRACTICE LOCATION (URBAN/ RURAL) OF PHYSICIANS WHO RECEIVED THEIR ALLOPATHIC MEDICAL SCHOOL TRAINING IN MAINE BETWEEN 1975 AND 1995.

Table III-a.

MAINE		
Number of physicians who were trained in ME and who are now practicing in ME **as a percentage of all physicians practicing in ME**.		**0.00**
Number of physicians who were trained in ME and are practicing in ME, **by practice location** (metro code[1]), **as a percentage of all physicians practicing in ME**.	#00	0.00
	#01	0.00
	#02	0.00
	#03	0.00
	#04	0.00
	#05	0.00
	#06	0.00
	#07	0.00
	#08	0.00
	#09	0.00
Number of physicians who were trained in ME and who are now practicing in ME **as a percentage of all physicians who were trained in ME**.		**0.00**
Number of physicians who were trained in ME and are practicing in ME, **by practice location** (metro code[1]), **as a percentage of all physicians trained in ME**.	#00	0.00
	#01	0.00
	#02	0.00
	#03	0.00
	#04	0.00
	#05	0.00
	#06	0.00
	#07	0.00
	#08	0.00
	#09	0.00

NOTE: MAINE DOES NOT HAVE AN ALLOPATHIC MEDICAL SCHOOL.

[1] 1995 Rural/Urban Continuum Codes for Metro and Non-metro Counties. Margaret A. Butler and Calvin L. Beale. Agriculture and Rural Economy Division, Economic Research Service, U.S. Department of Agriculture.

Codes # 00-03 indicate metropolitan counties:
00: Central counties of metro areas of 1 million or more
01: Fringe counties of metro areas of 1 million or more
02: Counties with metro areas of 250,000 - 1 million
03: Counties in metro areas of less than 250,000

NA: Not Applicable; no counties in the state are in the R/U Continuum Code

Codes # 04-09 indicate non-metropolitan counties:
04: Urban population of 20,000 or more, adjacent to metro area
05: Urban population of 20,000 or more, not adjacent to metro area
06: Urban population of 2,500-19,999, adjacent to metro area
07: Urban population of 2,500-19,999, not adjacent to metro area
08: Completely rural (no place w population > 2,500), adjacent to metro area
09: Completely rural (no place w population > 2,500), not adjacent to metro area

PRACTICE LOCATION (URBAN/ RURAL) OF PHYSICIANS WHO RECEIVED THEIR MOST RECENT GME TRAINING IN MAINE BETWEEN 1978 AND 1998.

Table III-b.

MAINE		
Number of physicians who received their most recent GME training in ME and who are now practicing in ME **as a percentage of all physicians practicing in ME**.		**26.56**
Number of physicians who received their most recent GME training in ME and are practicing in ME, **by practice location** (metro code[1]), **as a percentage of all physicians practicing in ME**.	#00	0.00
	#01	0.00
	#02	0.00
	#03	28.85
	#04	23.00
	#05	14.29
	#06	27.62
	#07	18.18
	#08	0.00
	#09	35.14
Number of physicians who received their most recent GME training in ME and who are now practicing in ME **as a percentage of all physicians who were trained in ME**.		**54.16**
Number of physicians who received their most recent GME training in ME and are practicing in ME, **by practice location** (metro code[1]), **as a percentage of all physicians trained in ME**.	#00	0.00
	#01	0.00
	#02	0.00
	#03	84.57
	#04	75.00
	#05	31.25
	#06	73.42
	#07	39.22
	#08	0.00
	#09	86.67

[1] 1995 Rural/Urban Continuum Codes for Metro and Nonmetro Counties. Margaret A. Butler and Calvin L. Beale. Agriculture and Rural Economy Division, Economic Research Service, U.S. Department of Agriculture.

Codes # 00-03 indicate metropolitan counties:
00: Central counties of metro areas of 1 million or more
01: Fringe counties of metro areas of 1 million or more
02: Counties with metro areas of 250,000 - 1 million
03: Counties in metro areas of less than 250,000
Codes # 04-09 indicate non-metropolitan counties:
04: Urban population of 20,000 or more, adjacent to metro area
05: Urban population of 20,000 or more, not adjacent to metro area
06: Urban population of 2,500-19,999, adjacent to metro area
07: Urban population of 2,500-19,999, not adjacent to metro area
08: Completely rural (no place w population > 2,500), adjacent to metro area
09: Completely rural (no place w population > 2,500), not adjacent to metro area
NA: Not Applicable; no counties in the state are in the R/U Continuum Code.

IV. LICENSURE AND REGULATION OF PRACTICE

States are responsible for regulating the practice of health professions by licensing each provider, determining the scope of practice of each provider type and developing practice guidelines for each profession. The tables below illustrate the licensure requirements for each of the health professions covered in this study as well as additional information on recent expansions in scope of practice or other novel regulatory measures taken by the state.

Table IV-a.

PHYSICIANS	
LICENSURE REQUIREMENTS	Graduated from a nationally accredited medical school located in the United States, Canada or the British Isles; passed comprehensive written examinations; and completed appropriate interviews. Separate Board of Osteopathy.
LICENSURE REQUIREMENTS: *INTERSTATE TELE-CONSULTATION*	**Full License** (through Statute), though temporary licenses can be granted for qualified physicians for physicians to provide relief in local or national emergencies.
STATE MANDATES INDIVIDUAL PROFESSION PROFILES TO BE PUBLICLY ACCESSIBLE	No

Sources: State licensing board, HPTS.

Table IV-b.

PHYSICIAN ASSISTANTS	
LICENSURE REQUIREMENTS	Graduation from accredited PA program and passage of National Commission on Certification of Physician Assistants (NCCPA) exam.
RECENT STATE MANDATED EXPANSIONS IN SCOPE OF PRACTICE	*PRESCRIPTIVE AUTHORITY* **Yes**. At the discretion of the Board of Medicine. PA may prescribe and dispense drugs and medical devices, including Schedules III-V controlled substances. Registration with Drug Enforcement Agency required. *PHYSICIAN SUPERVISION* Physician must be available by radio, telephone or telecommunication device. PA and physician establish supervision plan.

Source: State licensing board.

Table IV-c.

NURSES	
LICENSURE REQUIREMENTS	**Registered Nurses (RNs)** *By examination*: Have completed a course of study of not less than 2 years in an approved program in professional nursing and holds a degree, diploma or certificate. Have passed a written examination in subjects determined necessary by the board to ascertain the fitness of the applicant to practice professional nursing. **Advanced Practice Nurses (APNs)** Holds a current license to practice as a registered nurse, has successfully completed a formal education program that is acceptable to the board in an advanced nursing specialty area, holds a current certification credential for advanced nursing from a national certifying body whose certification program is acceptable to the board. **Licensed Practical Nurses (LPNs)** The applicant must have completed an approved 4-year high school course of study or its equivalent. The applicant must have completed a prescribed curriculum in a state-approved program for the preparation of practical nurses and holds a diploma or certificate. Have passed a written examination in subjects determined necessary by the board to ascertain the fitness of the applicant to practice practical nursing.
LICENSURE REQUIREMENTS: *FOREIGN-TRAINED NURSES*	Has graduated from an educational program approved by the official approving authority of a jurisdiction, which at the time of graduation had standards considered by the board to be equivalent to those of Maine schools; Has been duly licensed by examination by the nursing board of a jurisdiction, provided that the examination is considered by the board to be equivalent in all essentials to Maine's examination and provided that the license of the applicant is in good standing and that there is no cause for suspension or revocation of that license; Has passed the National Council Licensure Examination for registered nurses; and If licensed in the other jurisdiction by passing an examination in a language other than English, has either passed the Test of English as a Foreign Language or fulfilled the requirements of paragraph C by passing a test given in English.
LICENSURE REQUIREMENTS: *INTERSTATE TELE-CONSULTATION*	*None. In 2000, the state passed legislation* allowing *an interstate licensure compact for nurses to be created under regulation of the board of nursing.*
RECENT STATE MANDATED EXPANSIONS IN SCOPE OF PRACTICE	*PRESCRIPTIVE AUTHORITY* NPs, CNMs can prescribe schedules III-V in collaboration. Must work with collaborating physician for first two years. *PHYSICIAN SUPERVISION* Within their scope of practice, APNs can practice independently after 24 months of supervised practice.
RECENT STATE REQUIREMENTS TO IMPROVE WORKING CONDITIONS IN CERTAIN INSTITUTIONS	**Yes.** Limits on mandatory overtime.
STATE MANDATES INDIVIDUAL PROFESSION PROFILES TO BE PUBLICLY ACCESSIBLE	**Yes**, available on web.

Sources: State licensing board, AANA, ACNM, Pearson "Annual Legislative Update", HPTS.

Table IV-d.

DENTISTS	
LICENSURE REQUIREMENTS	Must be a graduate of or have a diploma from a dental college, school or dental department of a university accredited by an agency approved by the board and pass state examinations.
LICENSURE REQUIREMENTS: *INTERSTATE TELE-CONSULTATION*	**Full License.**

Source: State licensing board.

Table IV-e.

PHARMACISTS	
LICENSURE REQUIREMENTS	Have graduated and received the first professional undergraduate degree from a pharmacy degree program accredited by the American Council on Pharmaceutical Education or have received a degree from an approved equivalent program, have completed an internship or other program or demonstrated experience in the practice of pharmacy, and have successfully passed an examination given by the board.
RECENT STATE MANDATED EXPANSIONS IN SCOPE OF PRACTICE	No.
STATE MANDATES INDIVIDUAL PROFESSION PROFILES TO BE PUBLICLY ACCESSIBLE	No.

Source: State licensing board.

Table IV-f.

DENTAL HYGIENISTS	
LICENSURE REQUIREMENTS	Have successfully completed 2 years' training in a school of dental hygiene approved by the board, or be a full-time dental student who has satisfactorily completed at least half of the prescribed course of study in an accredited dental college, but who has not graduated from a dental college and passed board examinations.
RECENT STATE MANDATED EXPANSIONS IN SCOPE OF PRACTICE	*PRESCRIPTIVE AUTHORITY* No. *DENTIST SUPERVISION* **Can practice in a public health capacity under supervision of a dentist.** A dental hygienist may practice in a public or private school, hospital or other non- traditional practice under "public health supervision status" granted by the dental board on a case-by-case basis. The hygienist may perform the duties they can do under general supervision.

Source: State licensing board, ADHA.

Glossary of Acronyms

CNM: Certified nurse midwife.
CRNA: Certified registered nurse anesthetist.
NP: Nurse practitioner.

V. IMPROVING THE PRACTICE ENVIRONMENT

States have the challenge of not only helping to create an adequate supply of health professionals in the state, but also ensuring that those health professionals are distributed evenly throughout the state. Various programs and incentives are used by states to encourage providers to practice in rural and other underserved areas. The tables in this section describe Maine's programs as well as the perceived effectiveness of these programs.

RECRUITMENT/ RETENTION INITIATIVES

Table V-a.

INITIATIVE	In Use	Perceived or Known Impact (1= high, 5= low)	Health Professions Affected					
			Physicians	Nurses	Pharmacists	Dentists	Dental Hygienists	Physician Assistants
FOCUSED ADMISSIONS / RECRUITMENT OF STUDENTS FROM RURAL OR UNDERSERVED AREAS	Yes	N/A	X	X	X	X	X	
SUPPORT FOR HEALTH PROFESSIONS EDUCATION (stipends, preceptorships) IN UNDERSERVED AREAS	Yes	N/A	X			X		
RECRUITMENT / PLACEMENT PROGRAMS FOR HEALTH PROFESSIONALS	Yes	N/A	X	X	X	X	X	
PRACTICE DEVELOPMENT SUBSIDIES (i.e., start-up grants)	No							
MALPRACTICE PREMIUM SUBSIDIES	Yes	N/A	X					
TAX CREDITS FOR RURAL / UNDERSERVED AREA PRACTICE	No							
PROVIDING SUBSTITUTE PHYSICIANS (*locum tenens* support)	No							
MALPRACTICE IMMUNITY FOR PROVIDING VOLUNTARY OR FREE CARE	No							
PAYMENT BONUSES / OTHER INCENTIVES BY MEDICAID OR OTHER INSURANCE CARRIERS	Yes	N/A	X	X	X	X	X	X
MEDICAID REIMBURSEMENT OF TELEMEDICINE	Yes	N/A	X	X	X	X	X	X

N/A = Data was not available

***Source*: State health officials.**

LOAN REPAYMENT/ SCHOLARSHIP PROGRAMS *

Table V-b.

Program Type	Number of Programs	Number of Annual Participants	Average Retention Rate	Eligible Health Professions					
				Physicians	Nurses	Pharmacists	Dentists	Dental Hygienists	Physician Assistants
LOAN REPAYMENT	2	5	Not Available	X	X		X	X	X
SCHOLARSHIP	3	143	Not Available	X			X		

*** Includes only state-funded programs which require a service obligation in an underserved area. (NHSC state loan repayment programs are included since the state provides funding.)**

Source: State health officials.

WORKFORCE PLANNING ACTIVITIES*

Table V-c.

ACTIVITY	In Use	Health Professions Affected					
		Physicians	Nurses	Pharmacists	Dentists	Dental Hygienists	Physician Assistants
COLLECTION / ANALYSIS OF PROFESSIONS SUPPLY DATA: FROM *PRIMARY* SOURCES (e.g., licensure renewal process; other survey research)	Yes	X			X		
FROM *SECONDARY* SOURCES (e.g., state-based professional trade associations)	Yes	X			X		
PRODUCTION OF RECENT STUDIES OR REPORTS THAT DOCUMENT / EVALUATE THE SUPPLY, DISTRIBUTION, EDUCATION OR REGULATION OF HEALTH PROFESSIONS	**Yes**	X			X		
RECENT REGULATORY ACTIONS INTENDED TO REQUIRE OR ENCOURAGE COORDINATION OF POLICIES AND DATA COLLECTION AMONG HEALTH PROFESSIONS GROUPS OR LICENSING BOARDS	**No**						

* One state health official supplied these responses. Therefore, data may be limited and may not accurately reflect all current workforce-planning activities in the state.

Maine collects and analyzes supply data for physicians and dentists. Recently, the state has also produced reports and evaluations of the two professions.

VI. EXEMPLARY WORKFORCE LEGISLATION, PROGRAMS AND STUDIES

The following abstracts describe several of Maine's recent endeavors to understand and describe the status of the state's current health care workforce.

Legislation and Programs

S-711 (2002)
Establishes the Health Workforce Leadership Council to provide input on all policy initiatives and laws concerning the skilled health care workforce. The Council is expected to address the supply of skilled health workers in the state by looking at educational capacity and recruitment and retention efforts.

S-314 (2001)
Provides that a nurse may not be disciplined for refusing to work more than 12 consecutive hours. A nurse may be disciplined for refusing mandatory overtime in the case of an unforeseen emergency when overtimes is required as a last resort to ensure patient safety. Any nurse who is mandated to work more than 12 consecutive hours must be allowed at least 10 consecutive hours of off-duty time immediately following the worked overtime.

H-655 (2001)
Requires the Maine Technical College System to establish the Health Workforce Retraining Program for the purpose of making education and training programs available to eligible businesses and organizations, including hospitals, long-term care facilities, and other health care facilities, to support the training and retraining of health care employees to address changes in the health care workforce.

02-313 Chapter 1 (2001)
Board of Dental Examiners Rules
The Board amended rules relating to Public Health Supervision effective April 1, 2001. The updated rules include scope of practice restrictions and new application procedures. The rules state that dental hygienists may be reimbursed by third party payors for their services.

New England Regional Student Program
New England Board of Higher Education
The New England Board of Higher Education's Regional Student Program provides residents with a tuition break when they study certain majors not available at public colleges in their home state.

Maine Health Care Performance Council
The Council is funded by the Robert Wood Johnson Foundation and is charged with developing a long-range vision, goals, objectives, and performance measures for the health care delivery system in Maine. The Council is non-partisan and its members are appointed by the governor.

Studies

The Status of Access to Oral Health Care in Maine
Maine Department of Human Services, January 2001
The Legislature directed the Department of Human Services to evaluate the status of access to oral health care for uninsured people and Medicaid recipients in the state. According to the report, increasing access among Medicaid patients was is inhibited by a shortage of practicing dentists accepting Medicaid and administrative procedures that are burdensome to providers. The report stated that reimbursement rates are well below market rates and do not cover the direct costs of providing care. In addition to financial barriers, the department found geographical barriers to access. Maine has about 47 dentists per 100,000 population, which is below the national average.

The report states that while many local and professional associations have initiated activities designed to address oral health problems, there has been no comprehensive statewide effort to develop a oral health safety net or infrastructure. Some of the recommendations by the Department include: 1) directing resources to developing capacity to collecting comprehensive data and evaluating oral health; 2) expanding the scope of practice for dental hygienists; and 3) supporting the growth of the dental workforce by establishing a dental residency program, expanding funding for the state loan forgiveness and repayment programs, and working with key stakeholders to facilitate the recruitment of new dental professionals to the state.

Summary Report: Ad Hoc Committee on Access to Dental Care
Maine Dental Association, December 1999
This committee was formed to examine barriers to oral health access and recommend actions to help the Association develop its role in creating solutions. The committee's report states that a sustained coordinated approach that maximizes public and private resources is necessary to improving access to oral health services for Maine residents. The report states that there is a dental manpower shortage in the state; the average age of dentists is increasing; there are disparities in distribution of dentist throughout the state; and problems with the Medicaid program have led many dentists to discontinue participation.

Maine Health Care Skilled Worker Shortage: A Call to Action
Report of the Committee to Address the Health Care Skilled Worker Shortage, October 2001
The Maine Technical College System formed this committee in March 2001 in response to a request for help from health care employers. The report overviews the skilled worker shortage in the state, lists factors contributing to the shortage, and makes recommendations for improving the supply of workers in the state. It states that an inadequate supply of trained health professionals, poor retention rates of existing employees, and the movement of many people out of the profession have led to an urgent need for skilled workers in the state.

According to the committee, the state needs to improve working conditions and address structural financial issues related to health care payment methods in order to assure that there is an appropriate supply of workers to meet health care needs. The committee concludes that to address the shortages within the state, they will have to encourage people within the state to enter into the professions rather than compete with other states for students. The report notes that the state will need more new nurses and skilled workers than it graduates in the next year and calls for a sustained collaborative effort between the health care industry and higher education.

New Survey Shows Impact of Maine's Growing Healthcare Labor Shortage
Maine Hospital Association, September 2001
The Maine Hospital Association conducted a survey of hospitals and healthcare organizations to see how they were dealing with the growing healthcare and labor shortage. They found that the number of unfilled registered nurse positions had risen by 40% in the last year and that 76% of hospitals are reporting difficulty in recruiting nurses. The report notes that the number of graduates from Maine schools of nursing is down 6.8%, and that 45% of the workforce is age 45 or older. According to the survey, organizations have employed a variety of strategies including scholarship funds, tuition assistance, flexible scheduling, clinical preceptorship programs, and new clinical training sites for nursing degree programs to deal with the shortages.

HRSA State Health Workforce Profile
Bureau of Health Professions, December 2000
The State Health Workforce Profiles provide current data on the supply, demand, distribution, education and use of health care professionals in each state. Each state profile has an overview of the health status of state residents and health services within the state. In addition the profiles have breakdowns of health care employment by place of work and profession.
http://bhpr.hrsa.gov/healthworkforce/profiles/default.htm

VII. POLICY ANALYSIS

Organizations with Significant Involvement in Health Workforce Analysis/Development

- **Maine Hospital Association**
- **Department of Human Services**
- **Maine Dental Access Coalition**
- **Maine Dental Association**
- **Maine Nurses Association**
- **Organization of Maine Nurse Executives**
- **Acadia Health Education Coalition**

Evidence of Collaboration: Moderate (largely associated with health workforce data collection and analysis, and policy development)

Maine is a large, sparsely-populated state with a very small minority and ethnic population. Over a quarter of its population live in a primary care health professional shortage area (HPSA), and close to a fifth live in a dental HPSA. Concurrently, the number of National Health Service Corps professionals per 10.000 population in HPSAs is nearly four times the national average.

Despite the geographic disparities in access to health professionals, Maine's proportion of uninsured children and non-elderly is below the national average and is decline. Surprisingly, the state enjoys a significantly higher overall proportion of physicians, registered nurses, nurse practitioners, and physician assistants per 100,000 population than nationwide. However, it has fewer dentists and pharmacists than the U.S. average. The state has one private osteopathic medical school and no dental or pharmacy school.

In the mid 1990s, physicians received a significant increase to their Medicaid fee schedules and recently the state has upped Medicaid payments for physicians, dentists and other health professionals. Despite a need to offset a $248 million 2002 budget shortfall in the state, Maine's governor reversed plans to cut Medicaid reimbursements.

Medicaid now reimburses physicians and other health professionals for telemedicine services. Telehealth related services have received significant attention in Maine. A 2000 telehealth advisory group was formed by the governor to evaluate and develop telehealth applications and examine the cost effectiveness of existing and potential services in Maine. The state's current telemedicine network was implemented in 1997. A visiting nurse association in rural northeastern Maine, with foundation support, launched a telemedicine network in 1999 to monitor a patient's status via a videophone—a telemedicine unit placed in the patient's home.

Like many states, Maine has begun to realize it has a shortage of skilled health workers in several professions. The state's attention to health workforce issues historically has focused on recruiting workers from outside the state. The strategy is starting to lose favor with many policymakers who now realize that making available a quality workforce is about retention—both in terms of education and practice—as well as recruitment.

- A 2001 report by the Maine Hospital Association found that the number of unfilled registered nurse positions in its member hospitals had increased 40 percent in the past year and that three-quarters of hospitals report difficulty in recruiting nurses. Concurrently, the study found that the number of nursing school graduates in the state was declining, and there is inadequate capacity in many of the

- state's nursing schools to train more nurses. The report focused less on issues associated with the current workplace environment.
- A 2001 state law directs the state technical college system to establish a health workforce retraining program. As of early 2002, no funds had been appropriated for this program.
- In response to calls from health care employers, the technical college system also formed a committee in 2001 to address the health worker shortage. The committee issued a report in the fall of 2001 calling for the state to increase its own training capacity, particularly for nurses, rather than relying upon drawing workers from outside the state.
- A summit sponsored by nursing educators and leaders was convened in December 2001 where stakeholders were asked to examine the future of nursing and implications for nursing education.
- The governor convened a 2001 workshop to promote Maine as a relocation destination for affluent and active retirees. Concern over the effectiveness of this strategy centers on the unattractiveness of the state's current health care system.

Many of the recommendations from these reports and groups carry significant price tags that are not likely to gain serious attention for state lawmakers saddled with addressing major budget deficits. A somewhat less expensive idea involves efforts by the hospital association and other groups to seek legislative support for the creation of a statewide minimum health workforce data set and analysis center to address the serious lack of health workforce information. Proposals call on the state's professional licensing boards to collect such data as part of the relicensure process. However, such a proposal is viewed as too expensive and current 2002 legislation appears unlikely to be enacted.

Nursing

In 2001, Maine became the first state in the nation to enact a law limiting mandatory overtime for nurses. The new law, which amends an existing general overtime law, provides that nurses cannot be disciplined for refusing to work more than 12 consecutive hours, except in unforeseen circumstances when overtime is required as a last resort to ensure patient safety.

Concurrently, there remains debate as to whether state policymakers concerned about the nursing shortage should focus their attention more on retaining existing nurses in the profession or looking to the future to train more nurses. The state nurses association believe that a significant numbers of licensed nurses not now working in nursing in the state remain interested in returning to nursing and think attention should be placed on current working conditions for nurses. Others, including the state hospital association and nurse executives, argue that data on the current supply of nurses is inadequate and that more attention should be placed on longer term solutions such as training more nurses. Maine's nurses association is one of five state nursing associations nationwide that recently cut their affiliation with the American Nurses Association (ANA) in order to advocate for government-mandated nurse-to-patient ratios in acute care hospitals and elsewhere. The ANA opposes government mandated ratios.

Related recent or pending legislation, however, appears to have little chance of passage, due largely to the state's current fiscal crisis. A 2001 bill to establish a nursing loan repayment program was defeated. A 2002 proposed measure (carried over from 2001), supported by the nurses association, that would require institution of nurse staffing levels based on patient acuity, is seen as unworkable by hospitals and many nurse executives. Another 2001 carryover bill calling for the creation of a commission to study the nursing and other health profession shortage issue appears destined for defeat. The measure is supported by the nurse executives group, which issued a report in late 2001 on health workforce shortages in the state.

Dentists

There is consensus that Maine is facing a shortage of dentists, particularly in rural areas of the state. Growing evidence of a maldistributed, overworked and aging dental workforce is documented in both a 1999 workforce report by the state dental association and a 2001 report on oral health by the Department of Human Services. Maine has one of the lowest dentists per 100,000 population ratios nationwide.

Maine also has no dental school and has had difficulty establishing clinical training sites for graduate dentists. While the idea of establishing a dental school is not receiving serious attention due to costs, the Legislature in 2001 passed a measure that calls for a study (contingent on funding) to determine the feasibility of establishing an accredited dental residency program in the state. The Legislature also established a small loan forgiveness program for pediatric dentists in 2001 to encourage more dentists to come to Maine and serve children enrolled in Medicaid and the state children's health insurance program.

Despite a modest fee increase in 1998, the state's current dentists remain concerned about low Medicaid reimbursement rates. As in other states, Maine's dentists are reported to have turned away Medicaid recipients in large numbers due to low payment rates. A 2001 carryover bill being considered in 2002 would tie Medicaid payment rates to the 50th percentile of average dentist charges for the region. The state's fiscal situation is likely to prevent passage of the legislation.

In 1998, the Legislature expanded the scope of practice for dental hygienists by allowing them to apply to gain limited supervision by dentists in the provision of certain services in "public health" settings such as schools and nursing homes. Effective in 2001, it is not clear how the measure will benefit the practice of hygienists and access to oral health care in the state.

Pharmacists

There are increased reports that Maine is suffering a shortage of pharmacists. The supply of pharmacists in the state is below the national average. The state's hospitals and chain drug stores, particularly in rural communities, reportedly are having significant recruiting difficulties. Maine has no pharmacy school, but the University of New England is examining the feasibility of establishing one.

DATA SOURCES

Workforce Supply and Demand

American Association of Retired Persons, Public Policy Institute (AARP). Reforming the Health Care System: State Profiles 2001. (Washington, DC: 2002).

Bureau of Primary Health Care, Division of Shortage Designation (BPHC-DSD). Selected Statistics on Health Professional Shortage Areas (Bethesda, MD: December 2001).

Bureau of Primary Health Care, National Health Service Corps (BPHC-NHSC). National Health Service Corps Field Strength: Fiscal Year 2001 (Bethesda, MD: March 2002).

Centers for Disease Control and Prevention (CDC). Morbidity and Mortality Weekly Report: State Specific Prevalence of Selected Health Behaviors, by Race and Ethnicity—Behavioral Risk Factor Surveillance System, 1997. (Atlanta, GA: March 24, 2000) Vol. 49, No. SS-2.

Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Information and Analysis (HRSA-BHPr). State Health Workforce Profiles (Bethesda, MD: December 2000).

Health Resources and Services Administration, Bureau of Health Professions, Division of Nursing (HRSA-BHPr). The Registered Nurse Population, March 2000: Findings from the National Sample Survey of Registered Nurses (Rockville, MD: February 2002).

Kaiser Family Foundation, Kaiser Commission on Medicaid and the Uninsured (KFF). Health Insurance Coverage in America: 1999 Data Update (Palo Alto, CA: January 2001).

National Conference of State Legislatures, Health Policy Tracking Service (HPTS).

Personal conversations with HCFA regional office officials.

S. Norton and S. Zuckerman. "Trends in Medicaid Physician Fees" Health Affairs. 19(4), July/August 2000.

State Medicaid programs (data from NCSL survey).

United States Department of Commerce, U.S. Census Bureau.

United States General Accounting Office (GAO). Oral Health: Dental Disease is a Chronic Problem Among Low-Income Populations. (Washington, DC: April 2000) GAO/HEHS-00-72.

Health Professions Education

American Academy of Family Physicians (AAFP)

American Academy of Family Physicians. State Legislation and Funding for Family Practice Programs. (Washington, DC).

American Association of Colleges of Nursing (AACN)

American Association of Colleges of Osteopathic Medicine (AACOM). Annual Statistical Report. (Chevy Chase, MD).

American Association of Colleges of Pharmacy (AACP). Profile of Pharmacy Students. (Alexandria, VA).

American Dental Association (ADA)

American Dental Association. 1997-1998 Survey of Predoctoral Dental Educational Institutions. (Washington, DC).

American Dental Hygienist Association (ADHA)

American Medical Association (AMA). Health Professions Career and Education Directory.

American Medical Association. State-level Data for Accredited Graduate Medical Education Programs in the U.S.: 2000-2001. (Washington, DC: 2002)

Association of American Medical Colleges (AAMC)

Association of American Medical Colleges. Institutional Goals Ranking Report. (AAMC website).

Association of Physician Assistant Programs (APAP).

Association of Physician Assistant Programs. Seventeenth Annual Report on Physician Assistant Educational Programs in the United States, 2000-2001. (Loretto, PA: 2001).

Barzansky B. et al., "Educational Programs in U.S. Medical Schools, 2000-2001" JAMA. 286(9), September 5, 2001.

Henderson, T., Funding of Graduate Medical Education by State Medicaid Programs, prepared for the Association of American Medical Colleges, April 1999.

Kahn N. et al., "Entry of U.S. Medical School Graduates into Family Practice Residencies: 1997-1998 and 3-year Summary" Family Medicine. 30(8), September 1998.

Kahn N. et al., "Entry of U.S. Medical School Graduates into Family Practice Residencies: 1996-1997 and 3-year Summary" Family Medicine. 29(8), September 1997.

Kahn N. et al., "Entry of U.S. Medical School Graduates into Family Practice Residencies: 1995-1996 and 3-year Summary" Family Medicine. 28(8), September 1996.

National League for Nursing (NLN)

Oliver T. et al., State Variations in Medicare Payments for Graduate Medical Education in California and Other States, prepared for the California HealthCare Foundation. (Data from the Health Care Financing
Administration, compiled by the Congressional Research Service.)

Pugno P. et al.. "Entry of U.S. Medical School Graduates into Family Practice Residencies: 1999-2000 and 3-year Summary" Family Medicine. 32(8), September 2000.

Pugno P. et al.. "Entry of U.S. Medical School Graduates into Family Practice Residencies: 2000-2001 and 3-year Summary" Family Medicine. 33(8), September 2001.

Schmittling G. et al. "Entry of U.S. Medical School Graduates into Family Practice Residencies: 1998-1999 and 3-year Summary" Family Medicine. 31(8), September 1999.

State higher education coordinating board/university board of trustees (data from NCSL survey).

Physician Practice Location

1999 American Medical Association Physician Masterfile. Computations were performed by Quality Resource Systems, Inc. of Fairfax, Virginia.

Licensure and Regulation of Practice

American Association of Nurse Anesthetists (AANA)

American College of Nurse Midwives (ACNM). Direct Entry Midwifery: A Summary of State Laws and Regulations. (Washington, DC: 1999).

American College of Nurse Midwives. Nurse-Midwifery Today: A Handbook of State Laws and Regulations. (Washington, DC: 1999).

American Dental Hygienist Association

National Conference of State Legislatures, Health Policy Tracking Service.

Pearson L., editor. "Annual Legislative Update: How Each State Stands on Legislative Issues Affecting
Advanced Nursing Practice" The Nurse Practitioner. 25(1), January 2001.

State licensing boards (NCSL survey).

Improving the Practice Environment

State health officials (NCSL survey).